

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

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NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing  
(day/month/year) 11.06.2004

Applicant's or agent's file reference  
758.1298WOU1

IMPORTANT NOTIFICATION

International application No.  
PCT/US 03/07036

International filing date (day/month/year)  
06.03.2003

Priority date (day/month/year)  
08.03.2002

Applicant  
DONALDSON COMPANY, INC.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international  
preliminary examining authority:



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# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 758.1298WOU1	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/JS 03/07036	International filing date (day/month/year) 06.03.2003	Priority date (day/month/year) 08.03.2002
International Patent Classification (IPC) or both national classification and IPC B01D27/14, B01D27/14		
Applicant DONALDSON COMPANY, INC.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.  
  
☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  
  
 These annexes consist of a total of 4 sheets.

3. This report contains indications relating to the following items:
  - I ☒ Basis of the opinion
  - II ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV ☐ Lack of unity of invention
  - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI ☐ Certain documents cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application

Date of submission of the demand  07.10.2003	Date of completion of this report  11.06.2004
Name and mailing address of the international preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Hilt, D  Telephone No. +31 70 340-4259  

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/US 03/07036**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-21 as originally filed

**Claims, Numbers**

1-13 filed with telefax on 26.04.2004

**Drawings, Sheets**

1/8-8/8 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-13
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-13
Industrial applicability (IA)	Yes: Claims	1-13
	No: Claims	

2. Citations and explanations

**see separate sheet**

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. The present application refers to a liquid filter arrangement with secondary filter and bypass flow, and to a method for filtering liquid with such a filter arrangement.

Reference is made to the following documents:

D4: EP-A-0 729 775 (KNECHT FILTERWERKE GMBH) 4 September 1996 (1996-09-04)

D5: GB 1 087 565

The document D5 was not cited in the international search report. A copy of the document is appended hereto.

**1- ARTICLE 33 (3) PCT - INVENTIVE STEP**

The present application does not meet the requirements of Article 33(1) PCT, because the subject-matter of claims 1-13 does not involve an inventive step in the sense of Article 33(3) PCT.

**1.1- Independent apparatus claim 1 and method claim 12**

Document D4, which is considered to represent the most relevant state of the art, discloses a filter assembly and method from which the subject-matter of claims 1,12 differs in that:

- the primary filter element comprises a fibrous filter media supported by a support tube;
- the secondary filter element comprises a porous screen supported by a support tube;
- the porous screen is spaced at least 5 mm from the primary filter media support tube;

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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The problem to be solved by the present invention may therefore be regarded as to adapt the filtering performance and/or capacity of the filter assembly to the fluid to be filtered.

The solution proposed in claims 1,12 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

The features "using a fibrous media as primary filter element in combination with a filter screen as secondary filter element" and " a spacing of at least 5 mm" are matters of normal design procedure, see for example document D5 page 3 line 128- page 4 line 60. Their inclusions in the filter assembly described in document D4 would therefore be an obvious design possibility for the skilled person in order to solve the problem posed.

1.2- Dependent claims 2-11,13 do not contain any features which, in combination with the features of any claims to which they refer, meet the requirements of the PCT in respect of inventive step.

- (B) the primary filter media support tube; and,
    - (C) the first, open, end piece;
  - (ii) with the bypass valve construction being positioned within the volume.
2. A liquid filter arrangement according to claim 1 wherein:
- (a) the porous screen of the secondary filter construction comprises a wire screen.
3. A liquid filter arrangement according to claim 1 wherein:
- (a) the porous support structure comprises a spiral wound, edge interlocked, metal support tube.
4. A liquid filter arrangement according to claim 1 wherein:
- (a) the porous screen and the porous support structure, of the secondary filter construction, together define a tubular structure having first and second opposite ends:
    - (i) the first end of the tubular structure being secured to a first, open, end piece; and
    - (ii) the second end of the tubular structure being secured to a second, closed, end piece.
5. A liquid filter arrangement according to claim 4 wherein:
- (a) the cylindrical extension of pleated fibrous media has first and second, opposite, ends;
    - (i) the first end being non-releaseably secured to the first, open, end piece; and
    - (ii) the second end being non-releaseably secured to the bypass end piece.
6. A liquid filter arrangement according to claim 5 including:
- (a) a top plate positioned within the housing and permanently retaining the primary filter element, the secondary filter construction and the

bypass valve construction in the housing, to form a disposable filter unit.

7. A liquid filter arrangement according to claim 4 wherein:
  - (a) the cylindrical extension of pleated fibrous media extends between a first, open, primary filter element end piece and a second, open, primary filter element end piece;
    - (i) the first, open, primary filter element end piece being releaseably sealed to the first, open, end piece of the secondary filter construction; and
    - (ii) the second, open, primary filter element end piece being releaseably sealed to the bypass end piece.
8. A liquid filter arrangement according to claim 7 wherein:
  - (a) the primary filter element comprises a removable and replaceable component in the housing.
9. A liquid filter arrangement according to claim 2 wherein:
  - (a) the wire screen comprises a wire size of 0.030 inches in diameter or smaller.
10. A liquid filter arrangement according to claim 2 wherein:
  - (a) the wire screen has a wire density within the ranges of 20 to 50 per inch by 100 to 250 per inch.
11. A liquid filter arrangement according to claim 2 wherein:
  - (a) the wire screen comprises a plain Dutch weave.
12. A method for filtering liquid with a filter arrangement according to any of claims 1-11, the method comprising:
  - (a) directing liquid through the primary filter element; and then
  - (b) directing the liquid through the secondary filter element.



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13. A method for filtering liquid according to claim 12, and further comprising:
- (c) opening a bypass valve to permit the liquid to bypass the primary filter element and to pass through the porous screen.